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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/639,925	08/12/2003	Dirk Preiksas	920602-94605	6666
23644	7590	02/24/2005	EXAMINER	
BARNES & THORNBURG P.O. BOX 2786 CHICAGO, IL 60690-2786			LE, TOAN M	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/639,925

Applicant(s)

PREIKSAS ET AL.

Examiner

Toan M Le

Art Unit

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6-13 and 18 is/are rejected.
- 7) ☒ Claim(s) 2-5 and 14-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input checked="" type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/9/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-13, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by “Development and Application of a Computer Control System for an Analytical Electron Microscope”, Schneider et al. (referred hereafter Schneider et al.).

Referring to claim 1, Schneider et al. disclose an instrument (figure 2) having a user controllable operating parameter (page 888, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs) and at least one further operating parameter having a required value at least partially dependent on that of said user controllable parameter (page 889, 2<sup>nd</sup> col., 2<sup>nd</sup> paragraph), the instrument also having a memory for storing a number of possible values of the further operating parameter, each said value corresponding to a respective possible value of the user controllable parameter (page 889, 2<sup>nd</sup> col., 2<sup>nd</sup> paragraph), a selector for selecting one of said stored possible values for the further parameter and controlling the instrument accordingly (page 889, 2<sup>nd</sup> col., 2<sup>nd</sup> paragraph), a tuner for enabling a user to alter the selected value (page 889, 2<sup>nd</sup> col., 1<sup>st</sup> paragraph), and updating apparatus for updating the memory accordingly, so that the adjusted value of the further operating parameter is selected from the memory if the same value of user controllable parameter is then chosen again (page 890, 1<sup>st</sup> col., 3<sup>rd</sup> paragraph; figure 2).

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As to claim 6, Schneider et al. disclose an instrument (figure 2), in which the further operating parameter is one of the plurality of such parameters, values for all of which are stored in the memory means (page 887, 1<sup>st</sup> col., 1<sup>st</sup> paragraph).

Referring to claim 7, Schneider et al. disclose an instrument (figure 2), in which the instrument is a charged particle beam instrument having beam generating means for generating charged particles and for subjecting said particles to an accelerating voltage to create a beam, and an alignment element for controlling the alignment of the beam, wherein said accelerating voltage constitutes the user controllable parameter and the further operating parameter comprises a setting for the alignment element (page 889, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs).

As to claim 8, Schneider et al. disclose an instrument (figure 2), in which the alignment element is a magnetic coil, and the associated further parameter is the value or relative value of current passed through the coil (page 887, 1<sup>st</sup> col., 1<sup>st</sup> paragraph; page 889, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs).

Referring to claim 9, Schneider et al. disclose an instrument (figure 2), in which the alignment element is an electrode the value of the associated parameter being the voltage applied to the electrode (page 889, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs).

As to claim 10, Schneider et al. disclose an instrument (figure 2), when appended to claim 6 in which the instrument has a plurality of different alignment coils, and the further operating parameters comprise the currents in the coils or the relative current magnitudes in the coils (page 889, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs).

Referring to claim 11, Schneider et al. disclose an instrument (figure 2), in which the charged particle beam instrument is a scanning electron microscope, the beam generating means,

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comprising an electron gun having a cathode and an extraction electrode to which said accelerating voltage is applied, the alignment coils acting as gun alignment coils for controlling the alignment of the beam onto an electron optical axis of the microscope (page 888, 2<sup>nd</sup> col., 2<sup>nd</sup> and 3<sup>rd</sup> paragraphs; page 889, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs; figure 2).

As to claim 12, Schneider et al. disclose an instrument (figure 2), in which the electron microscope includes a plurality of apertures in the path of a beam to be generated by the beam generating means, wherein the alignment coils are operable to direct the beam through any selected one of the apertures (page 889, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs).

Referring to claim 13, Schneider et al. disclose an instrument (figure 2), in which the magnitude of the accelerating voltage comprises one of a plurality of user controllable parameters, another such parameter being constituted by the identity of the aperture through which the beam is to pass (page 889, 2<sup>nd</sup> col., 1<sup>st</sup> and 2<sup>nd</sup> paragraphs).

As to claim 18, Schneider et al. disclose a scanning charged particle beam instrument (figure 2) having a gun for generating the beam of charged particles, a plurality of apertures through any selected one of which the beam may pass, accelerating electrode means which a voltage is applied to accelerate the particles away from the gun, and alignment means for directing the beam through the selected aperture, wherein the instrument includes a memory in which are stored values for the settings of alignment means dependent on the voltage applied to the accelerating electrode and the choice of aperture (page 889, 2<sup>nd</sup> col., 2<sup>nd</sup> paragraph; page 890, 1<sup>st</sup> col., 1<sup>st</sup> paragraph).

*Allowable Subject Matter*

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Claims 2-5 and 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,886,816 to Faris

U.S. Patent No. 6,512,632 to Yamamoto

U.S. Patent No. 6,760,154 to Focht

U.S. Patent No. 6,825,480 to Watanabe et al.

U.S. Patent No. 6,674,574 to Aono

U.S. Patent No. 5,633,491 to Kasdan

U.S. Patent No. 6,841,775 to Kondo et al.

U.S. Patent No. 6,765,217 to Nishimura et al.

ZpertEze: A Knowledge-Based Approach to Scanning Electron Microscopy, Caldwell et al., In: Applications and Innovations in Expert Systems V. SGES Publication, 1997, Pages 127-140

Integrated Windows-Based Control System for an Electron Microscope, Ruan et al., Rev. Sci. Instrum., Vol. 65, No. 12, December 1994, Pages 3682-3688

A New Low Energy Electron Microscope, Tromp et al., Surface Review and Letters, Vol. 5, No. 6, 1998, Pages 1189-1197

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan M. Le whose telephone number is (571) 272-2276. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M..


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toan Le

February 14, 2005



John Barlow  
Supervisory Patent Examiner  
Technology Center 2800